

REMARKS

Claims 29 and 34 have been canceled. Claims 1, 5, 6, 12, 15-21, 23-28, 30-33, 35, 37 and 39 are pending. The limitations stated in canceled claims 29 and 34 have been incorporated into each of the independent claims, 1, 6 and 15. No new matter was added. For this and other reasons, Applicants respectfully submit that the present application is in condition for allowance.

Claim Rejections Under 35 USC §103(a)

In the Final Office Action dated June 23, 2005, claims 1, 5, 6, 12, 15-21 and 23-40 are rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 4,927,677 issued to Kasai in view of U.K. Patent Application Publication No. GB 2295617 A of Branch.

The Kasai patent discloses a container (10) having an opening heat-sealed with a top cover sheet (12). The walls of the container (10) include a barrier layer (1) which is “a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester.” (See column 4, lines 38-55, of the Kasai patent.) According to some embodiments of Kasai, the barrier layer (1) is sandwiched between a pair of polypropylene films (2). According to the embodiment illustrated in FIGs. 4 and 6 of Kasai, the walls of the container can include an additional film layer (4) made from a blend of polypropylene with 25 wt% to 35 wt%, preferably 30 wt%, of an inorganic talc filler. (See column 4, lines 59-62, of the Kasai patent.) The thickness of the talc-filled film layer (4) is required to be 400 to 900 microns, or more preferably, 600 to 700 microns. (See column 5, lines 20-23, of the Kasai patent). The top cover sheet (12) of Kasai is made of a biaxially stretched film (6) of a copolymer resin of vinylidene chloride and an acrylic ester, a sequentially biaxially stretched film (7) of nylon 6,

and a heat-sealable heat-resistant plastic film (8). (See FIGs. 7 and 8 and column 6, lines 30-65, of the Kasai patent.)

The Branch reference discloses the use of a platelet filler of high purity talc, for instance, in making injection molded shoulders of toothpaste tubes.

Applicants respectfully submit that the claims of the present application are patentable over the cited combination of references for at least the following reasons.

Core Barrier Layer of Ethylene Vinyl Alcohol or Amorphous Polyamide

Some of the limitations stated in canceled claims 29 and 34 have been incorporated into the independent claims of the present application. No new matter was added. The independent claims, as amended, of the present application specifically require the core barrier layer to be ethylene vinyl alcohol or amorphous polyamide.

The Kasai and Branch references fail to disclose a core barrier layer of ethylene vinyl alcohol or amorphous polyamide used in combination with a talc-filled non-polar thermoplastic polyolefin layer. The core barrier layer of Kasai is “a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester.” (See column 4, lines 38-55, of the Kasai patent.)

There is no disclosure, suggestion, teaching or motivation provided by the Kasai patent for modifying its container wall structure by replacing the “biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester” with an ethylene vinyl alcohol or amorphous polyamide core barrier layer. In fact, the Kasai patent teaches away from the use of anything but “a biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester.” For example, in discussing the prior art on column 1, lines 22-49, Kasai references a laminate material having an ethylene-vinyl alcohol copolymer film sandwiched

between a pair of non-platelet filled polypropylene films and states that such laminates are unsuitable for use in the container of Kasai. Thus, one of skill in the art following the teachings of Kasai would clearly avoid the use of an ethylene vinyl alcohol core barrier layer.

Specific Use of 5% to 15% by Weight of a Platelet Filler

As readily admitted by the Examiner in the Final Office Action, the Kasai patent clearly fails to disclose, teach or suggest the limitation in the independent claims of the present application with respect to the claimed “further layer” consisting of a non-polar thermoplastic polyolefin resin filled with 5% to 15% by weight of a platelet filler. Rather, the disclosure of the Kasai patent is limited to the use of a film layer made from a blend of polypropylene with 25 wt% to 35 wt%, preferably 30 wt%, of an inorganic talc filler. (See column 4, lines 59-62, of the Kasai patent). Accordingly, the Kasai patent clearly fails to disclose the limitation of 5% to 15% by weight of a platelet filler.

In the Final Office Action, the Examiner states that one of skill in the art would vary the amount of talc, outside of the range specifically taught as being useful by Kasai, to obtain a desired thermal resistance. Applicants respectfully disagree with this interpretation of the Kasai patent and respectfully request reconsideration.

There is no fair disclosure, teaching or suggestion in the Kasai patent to utilize a relatively small amount of talc as required by the claims of the present application. The Kasai patent teaches that a minimum of 25% by weight of inorganic talc filler is required to obtain the benefit of thermal resistance. The Kasai patent fails to disclose that any degree of thermal resistance can be obtained when as little as 5% to 15% by weight of a platelet filler is utilized.

Specific Use of a High Purity Talc Platelet Filler and a
“Further Layer” Having a CIE Whiteness Index of at Least 40

As readily admitted by the Examiner in the Final Office Action, the Kasai patent clearly fails to disclose, teach or suggest the limitation in the claims of the present application with respect to the use of high purity talc which enables the claimed “further layer” of the laminate to have a CIE whiteness of at least 40 as well as a minimum aspect ratio of at least 5 and an average aspect ratio of from 16 to 30.

However, in the Final Office Action, the Examiner states that the Branch reference discloses the use of a high purity talc platelet filler “for the purpose of obtaining a container which provides a good oxygen barrier”. Thus, the Examiner rejects the claims of the present invention stating that one of skill in the art would modify the container of Kasai according to the teachings of Branch. Applicants respectfully disagree and respectfully request reconsideration.

As stated at other places in the Final Office Action by the Examiner, Kasai’s purpose for using an inorganic talc filler of 25% to 35% by weight in a polypropylene film is to improve “cold proofing and thermal stability” of the polypropylene film. (See column 3, lines 13-15, of the Kasai patent.) Kasai also teaches that the inorganic talc filler is used so that “odor of the polypropylene does not transfer to contents” within the container. (See column 7, lines 33-36, of the Kasai patent.)

In contrast, the Branch patent relates to the use of a high purity talc filler, for instance, in an injection molded shoulder of a toothpaste tube, that improves gas/vapor barrier qualities of the injection molded shoulder. More specifically, the platelets of high purity talc having reduced amount of impurities “delaminate relatively easier” yet “resist fracture” thereby

“increasing the aspect ratio of the talc when it is subjected to high shear”. (See page 4, line 31, to page 5, line 16, of the cited Branch reference.)

Applicants respectfully submit that there is no motivation for combining the references as suggested by the Examiner in the Final Office Action or for modifying the container wall structure of Kasai according to the teachings of Branch. Kasai utilizes an inorganic talc filler solely for the purposes of improving “cold proofing and thermal stability” of a polypropylene film and for preventing odor transfer from the polypropylene film to the contents. Kasai relies solely on the “biaxially stretched film of a copolymer resin of vinylidene chloride and an acrylic ester” for providing a gas and vapor barrier. Accordingly, one of skill in the art would have no reason to utilize a high purity talc in the container wall structure of Kasai since Kasai does not utilize the talc for gas and vapor barrier purposes. There is no teaching in either reference that suggests the purity of the talc filler would have any effect on the “cold proofing and thermal stability” of a polypropylene film and any effect on the ability to prevent odor transfer from a polypropylene film into the food contents within a container.

Required Thickness of Talc-Filled “Further Layer”

Dependent claims 18, 19, 30, 31 and 33 of the present application require the claimed platelet-filled “further layer” to have a thickness of 5 to 150 microns, 20 to 150 microns, 10 to 70 microns, or 50 microns. In the Final Office Action, the Examiner rejects the above referenced claims relying on the disclosure on column 5, lines 13-19, of the Kasai patent.

The thickness of the talc-filled layer disclosed by the Kasai patent is significantly thicker than that claimed by the present application. The Kasai patent at column 5, lines 20-

23, discloses a thickness for the “blended polypropylene film (4)” of 400 to 900 microns, or more preferably, 600 to 700 microns.

Column 5, lines 13-19, of the Kasai patent, which is cited and solely relied upon by the Examiner to reject claims 18, 19, 30, 31 and 33 of the present application, states the thickness for the non-platelet filled polypropylene film (2). Column 5, lines 13-19, of the Kasai patent does not provide any information on the thickness of the platelet-filled polypropylene film (4).

Accordingly, Applicants respectfully submit that the Kasai patent fails to disclose the limitations of claims 18, 19, 30, 31 and 33.

High Density Polyethylene Talc-Filled Layer

Dependent claims 20, 21, 37 and 39 of the present application require the claimed non-polar thermoplastic polyolefin resin of the further layer to be high density polyethylene. In the Final Office Action, the Examiner rejects the above referenced claims relying on the disclosure on column 6, lines 56-60, of the Kasai patent.

As illustrated in FIG. 9 of the Kasai patent, the opening of the container (10) is closed by heat sealing a sheet cover (12) to the rim of the container. The structure of the sheet cover (12) is illustrated in FIGs. 7 and 8 and is discussed in detail on column 6, line 30, to column 7, line 26, of the Kasai patent. The laminated structure of the sheet cover (12) does not include a talc-filled layer. Rather, it includes a biaxially stretched film (6) of a copolymer resin of vinylidene chloride and an acrylic ester, a sequentially biaxially stretched film (7) of nylon 6, a heat-sealable heat-resistant plastic film (8), and an optional biaxially stretched film (9) of nylon 6.

Column 6, lines 56-60, of the Kasai patent, which is cited and solely relied upon by the Examiner to reject claims 20, 21, 37 and 39 of the present application, states that the heat-sealable heat-resistant plastic film (8) of the cover sheet (12) may be plastic films made by blends of polypropylene and other polyolefins.

Applicant respectfully submits that the Kasai patent fails to disclose the limitations of claims 20, 21, 37 and 39. The cover sheet of Kasai which is the subject of column 6, lines 56-60, of the Kasai patent does not include a talc-filled layer as required by the claims of the present invention.

Combination of Limitations

The claims of the present application require a specific combination of elements to form a laminate material for a wall of a container that is particularly resistant to absorbing flavoring molecules from the contents into the walls of a container. The combination requires a core barrier layer of ethylene vinyl alcohol or amorphous polyamide that is extremely thin (less than 25 microns). It also requires a non-polar thermoplastic polyolefin resin layer that is positioned inward of the core barrier layer relative to the container contents, that contains 5% to 15% by weight of a high purity talc, and that has a CIE whiteness of at least 40 so that the walls of the container resist absorbing flavors from the contents into the wall of the container. The container made from the laminate is heat-resistant and suitably strong for constructing relatively rigid containers.

Such a container, method, and specific combination of layers are neither fairly disclosed nor made obvious by Kasai in view of Branch. Kasai is not concerned with preventing flavoring of contents from being absorbed into the walls of the container. It teaches away from the specified core barrier layer of the claims of the present application and

teaches away from the specified range of platelet filler. In addition, one of skill in the art would find no reason to modify Kasai in view of Branch since the talc filler in Kasai is utilized for completely different reasons than that of Branch. Kasai's use is for cold proofing and thermal resistance and for preventing the odor of polypropylene from transferring into the contents of the container. Branch does not suggest anything with respect to these features. Further, the outer layers of Kasai are clearly limited to the use of polypropylene films, and the thickness of the talc-filled polypropylene film is significantly larger than that claimed by the present application.


Accordingly, for all the above stated reasons, Applicants respectfully submit that the claims of the present application are patentable over the Kasai patent in view of the Branch reference. Applicants request reconsideration and removal of the §103(a) rejection.

Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
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